

# (12) UK Patent Application (19) GB (11) 2 297 598 (13) A

(43) Date of A Publication 07.08.1996

(21) Application No 9506945.6

(22) Date of Filing 04.04.1995

(30) Priority Data

(31) 9501382

(32) 24.01.1995

(33) GB

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(51) INT CL<sup>6</sup>

B67D 1/07 // B08B 9/06

(52) UK CL (Edition O )

F2N N2A

(56) Documents Cited

GB 2287296 A

GB 2260795 A

(58) Field of Search

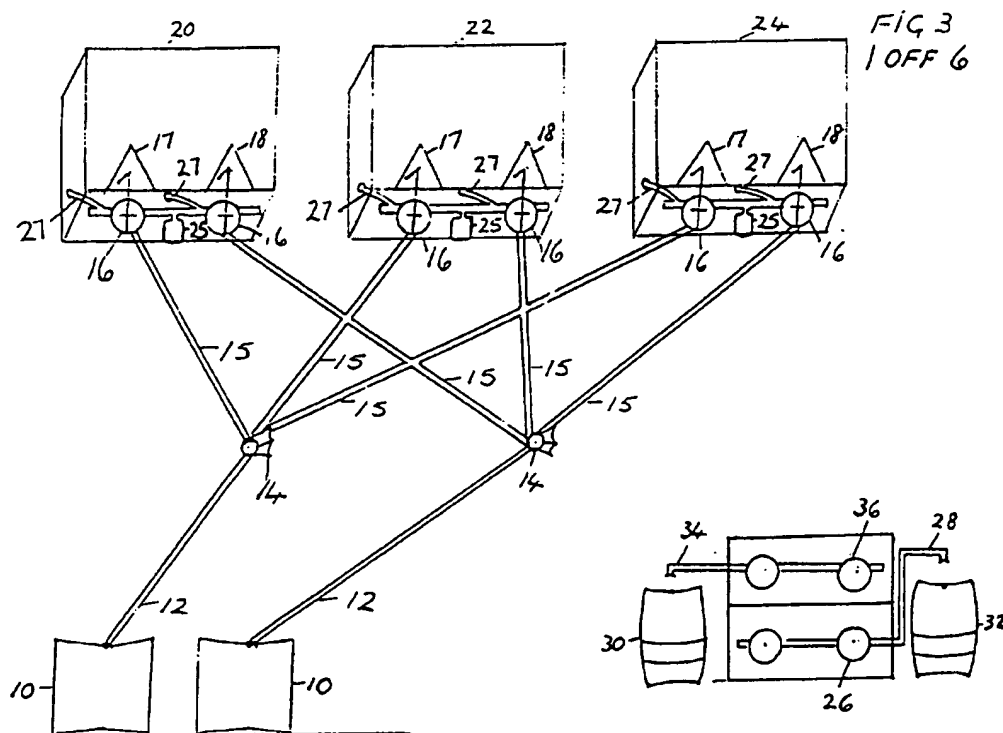
UK CL (Edition O ) F2N N2A , G1N NBAA NBMA

INT CL<sup>6</sup> B08B 9/02 9/06 , B67D 1/07 1/08

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## (54) Improved beer line cleaning system

(57) The system comprises a number of beer kegs 10 and a number of dispensers 17, 18 connected through lines 12, 15 which must be cleaned with water 32 and/or cleaning fluid 30, each dispenser having a closely associated sensor 16 which detects the presence of water in the line and disables the dispenser, so as to maximise the amount of beer that may be dispensed for sale.



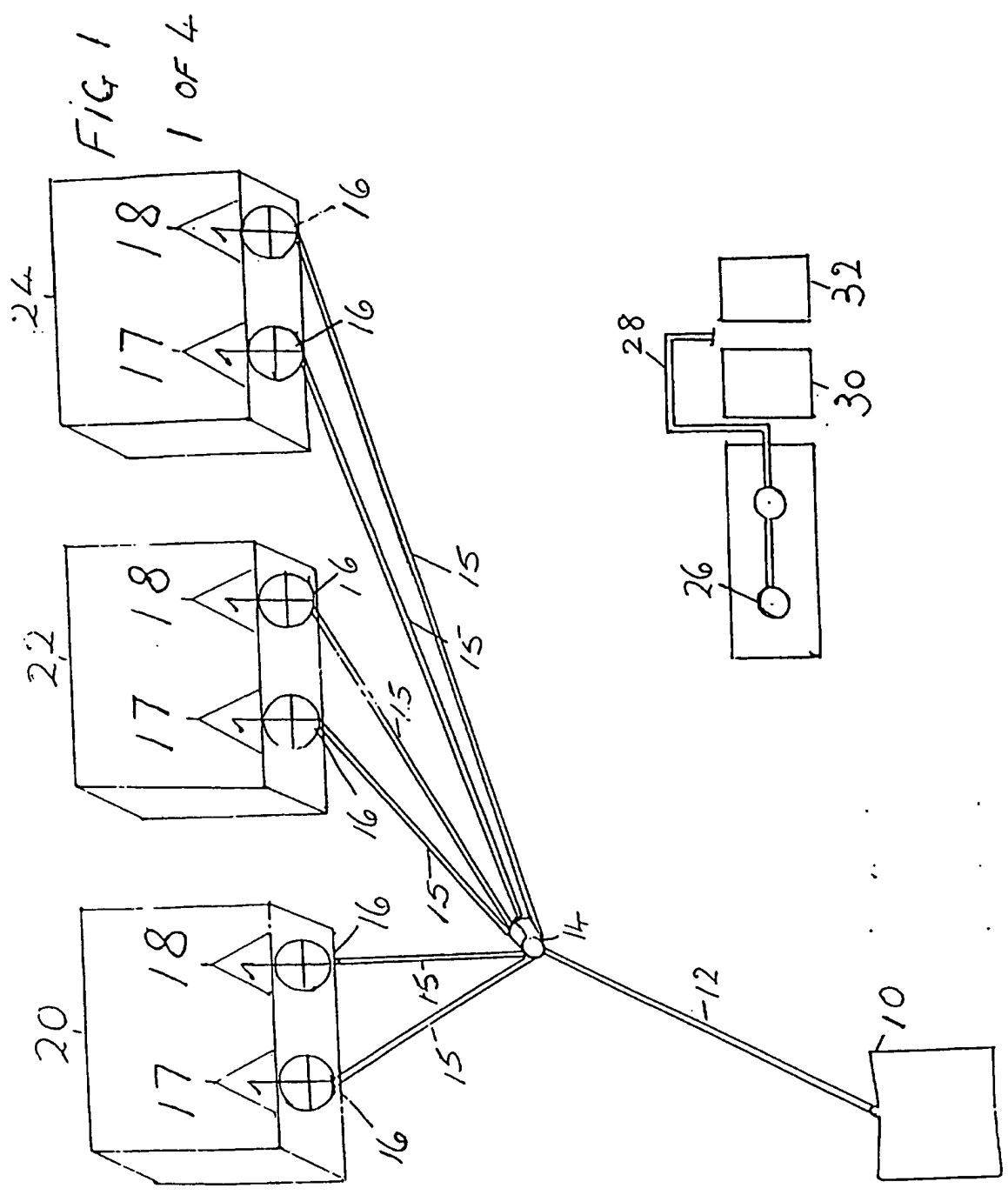


FIG 1  
2 OF 4

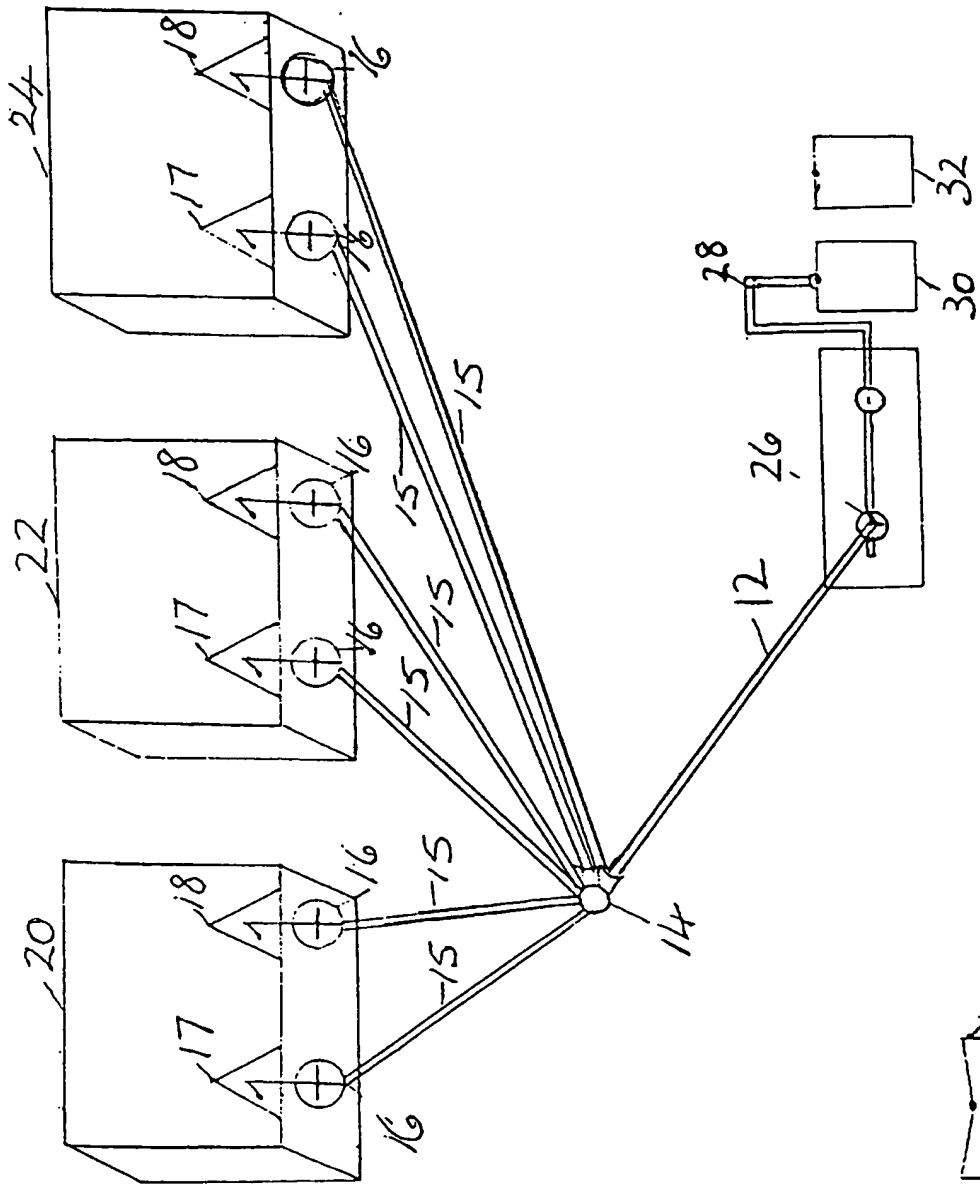
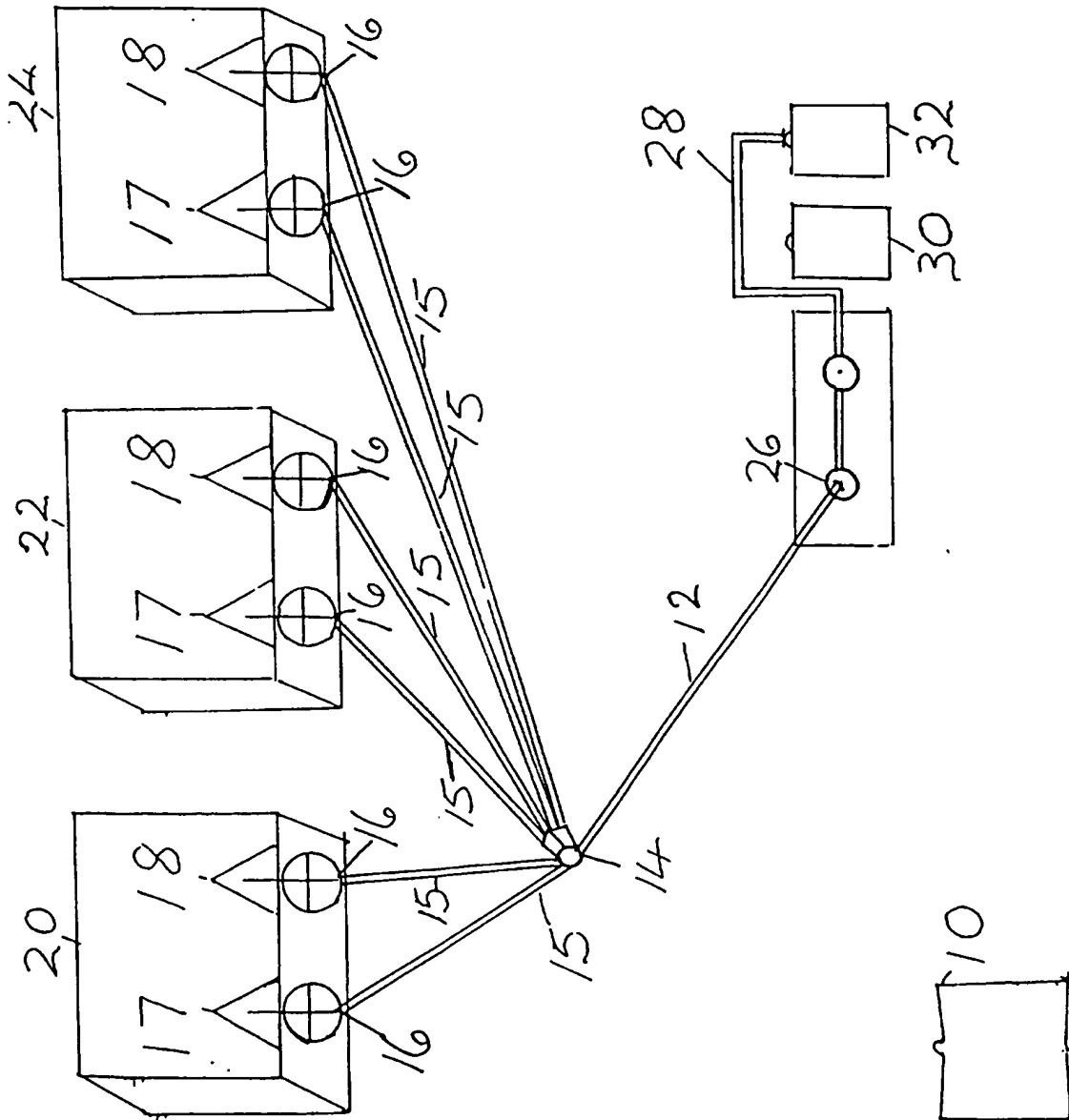


FIG 1  
3 OF 4



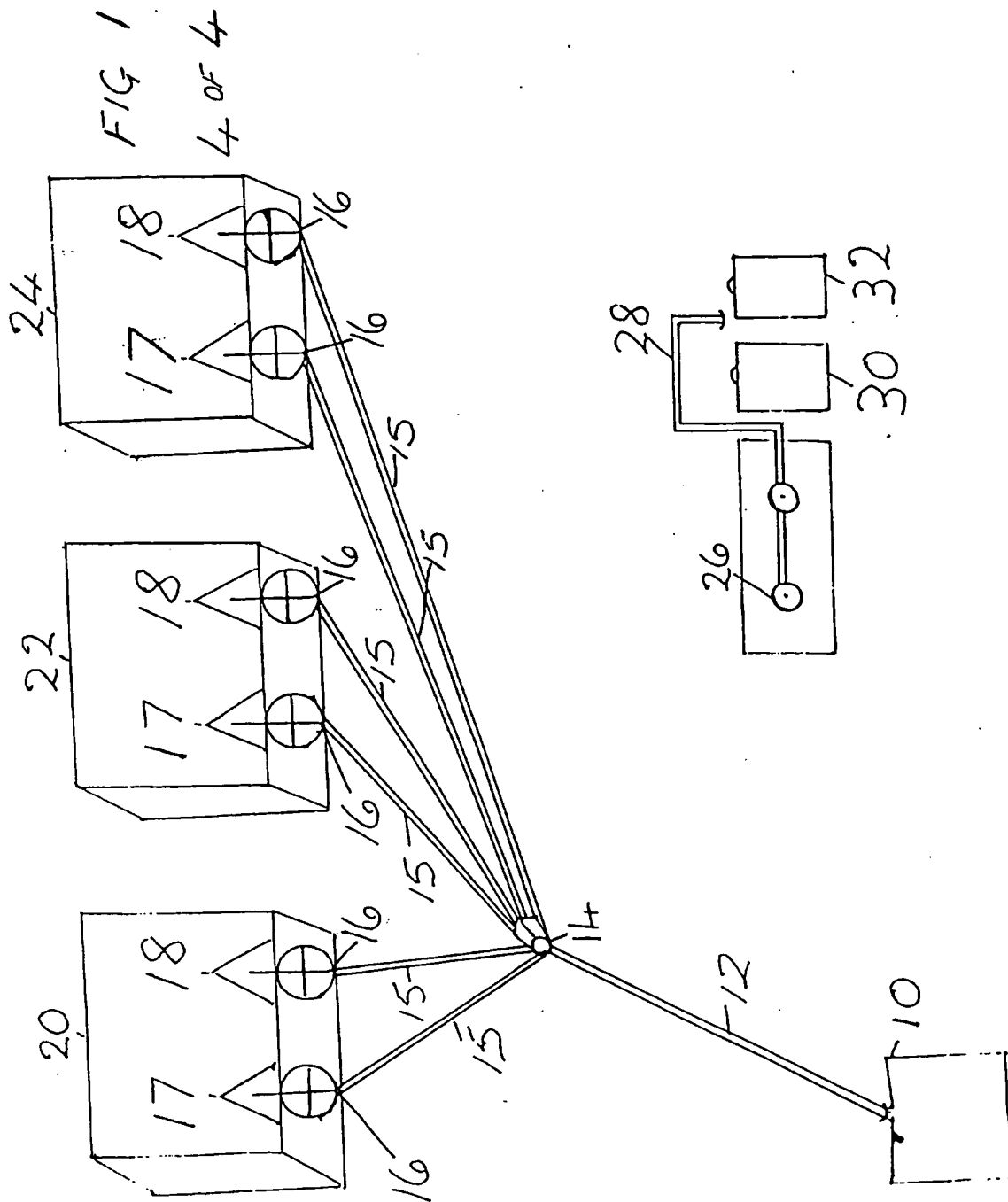


FIG 2  
1 OF 5

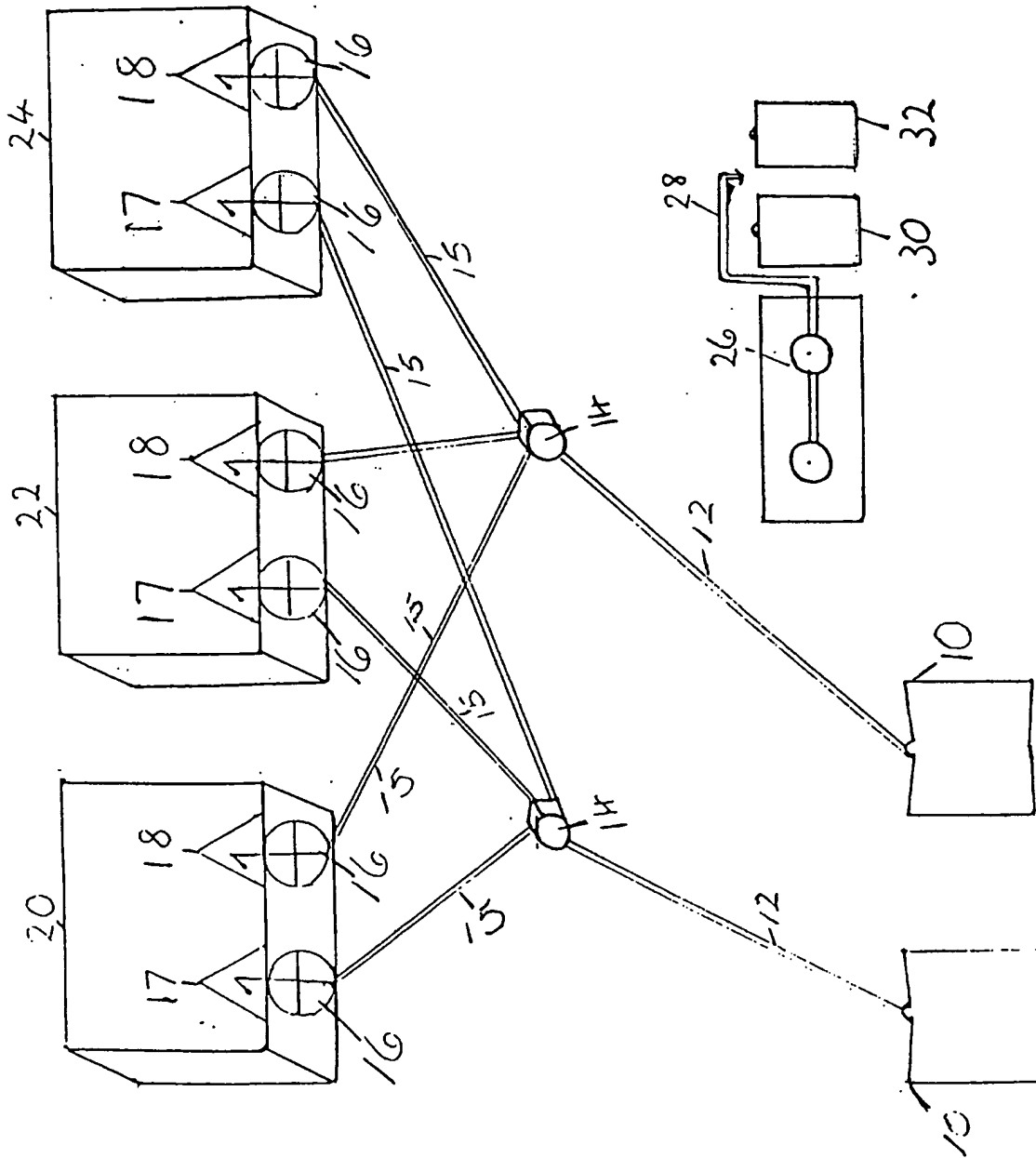


FIG 2  
2 OF 5

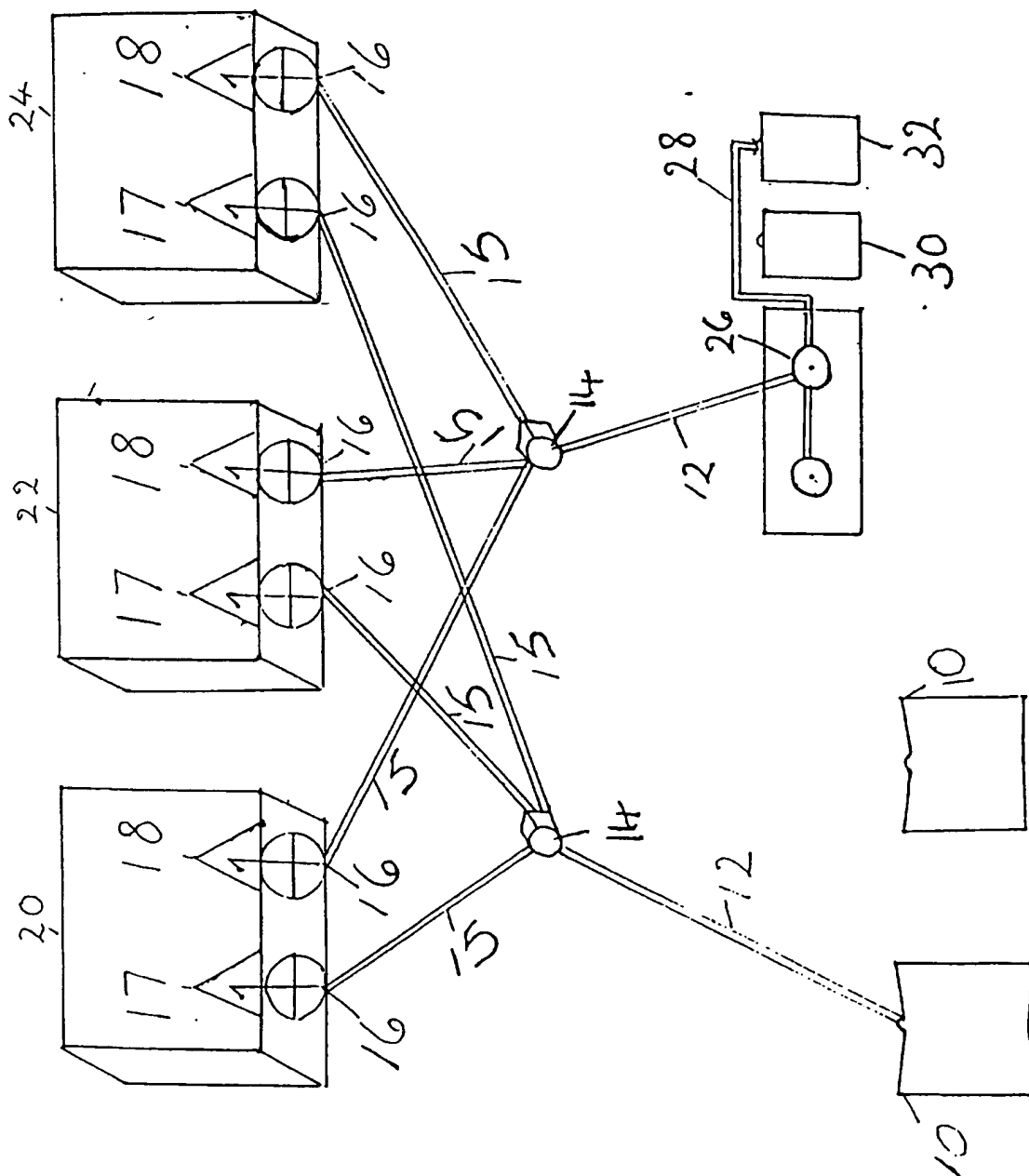


FIG 2  
3 OF 5

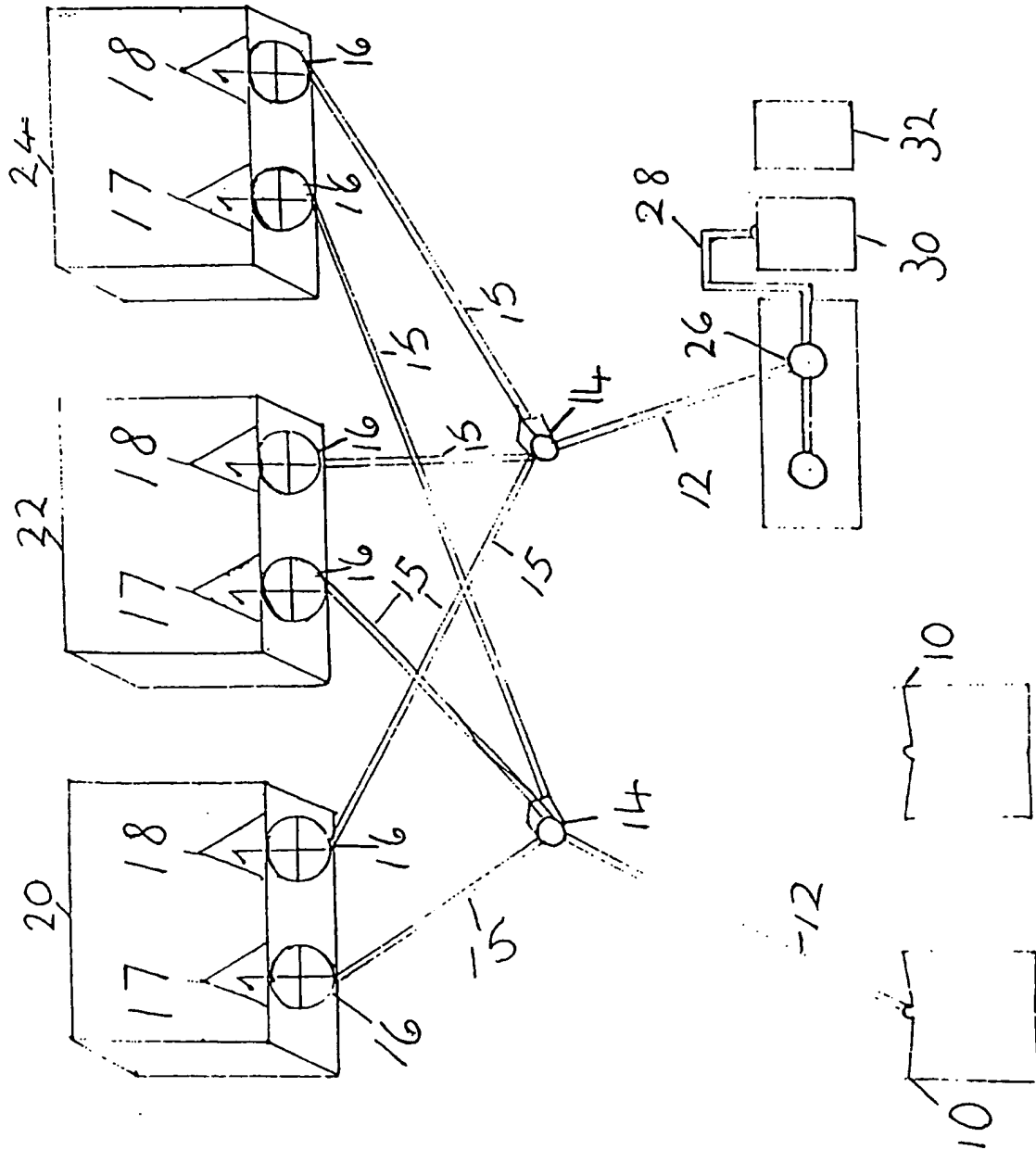
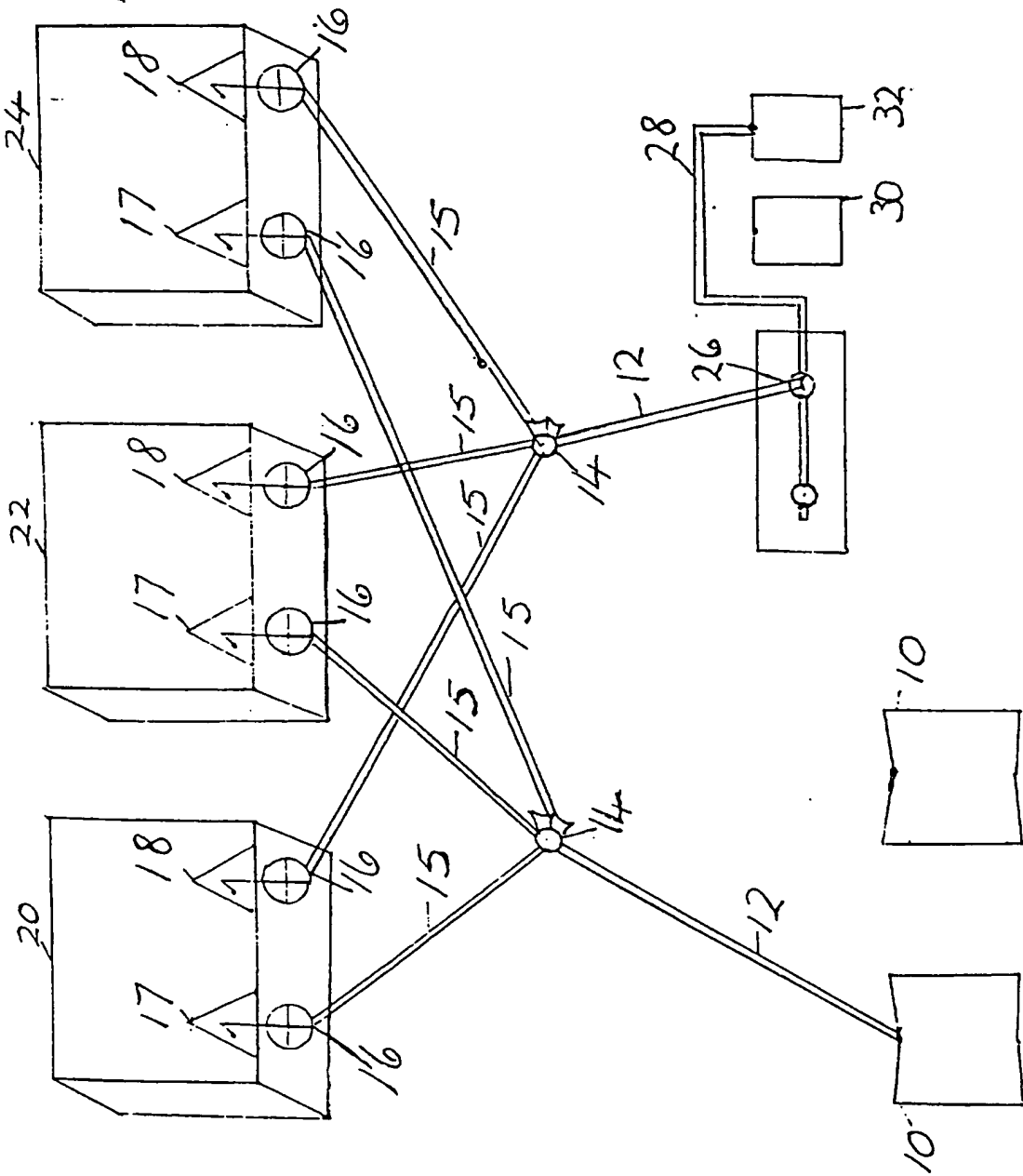




FIG 2  
4 OF 5



9/15

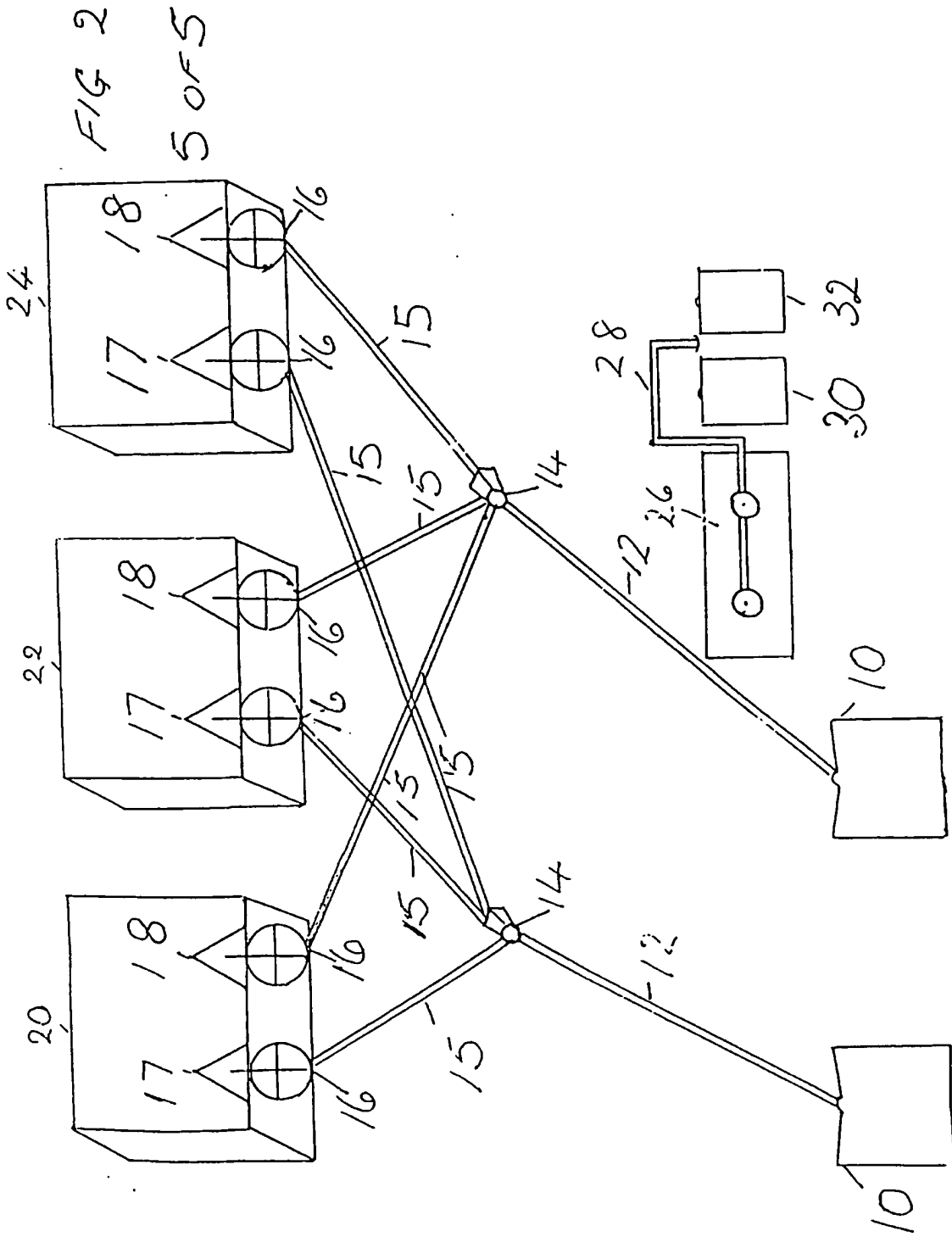


FIG 3  
1 OFF 6

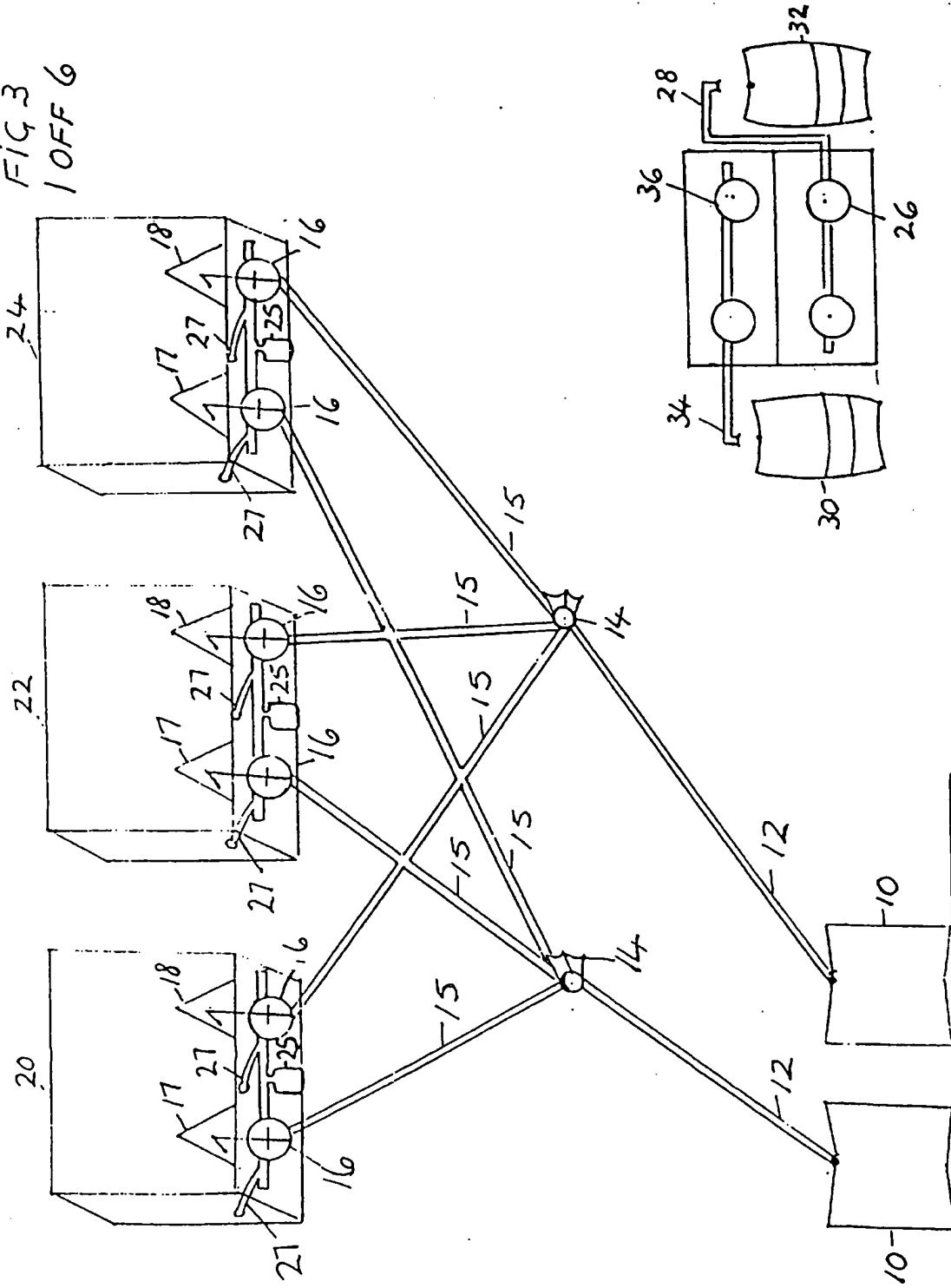


FIG 3  
2 OFF 6

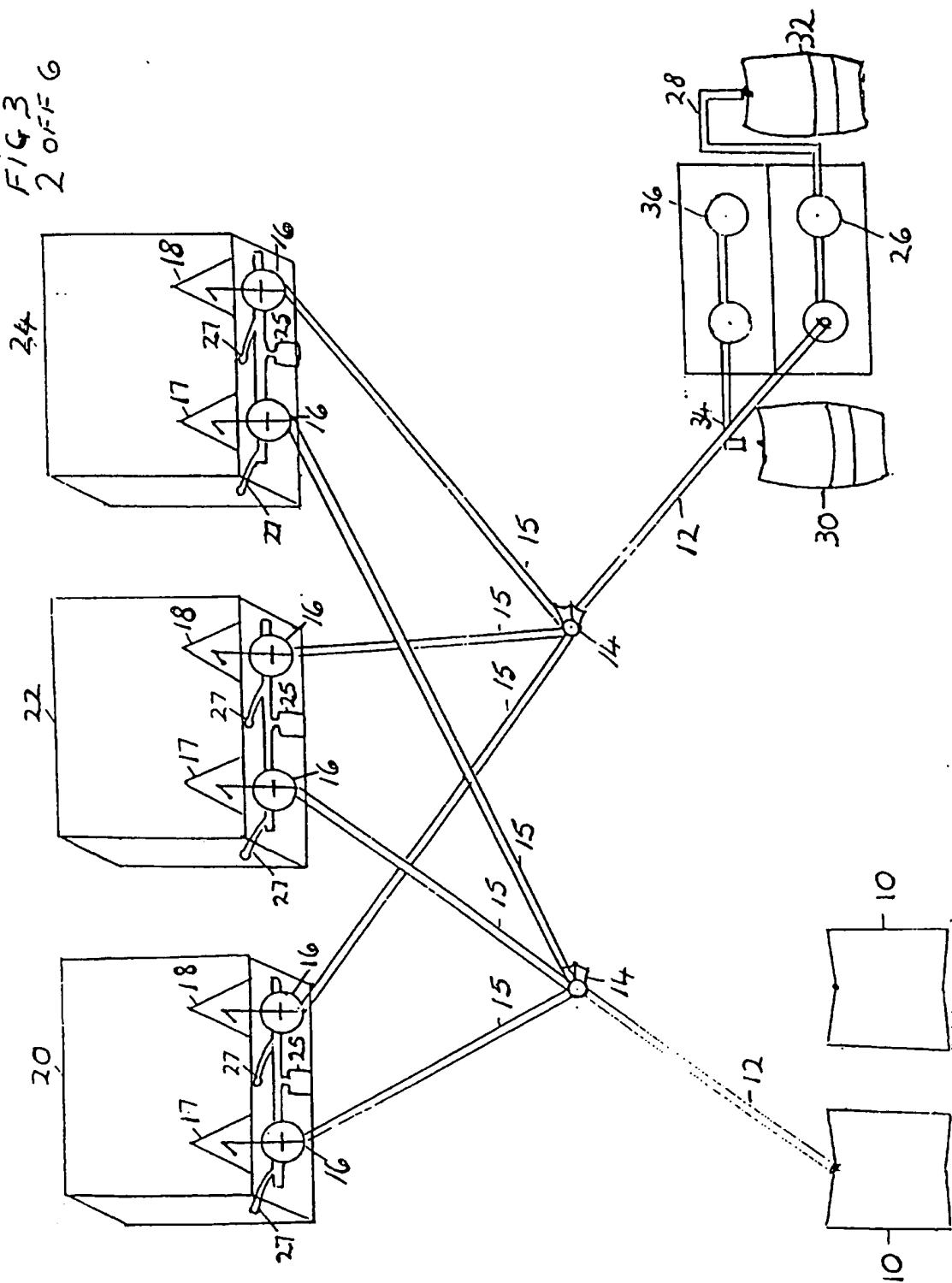


FIG 3  
304-6

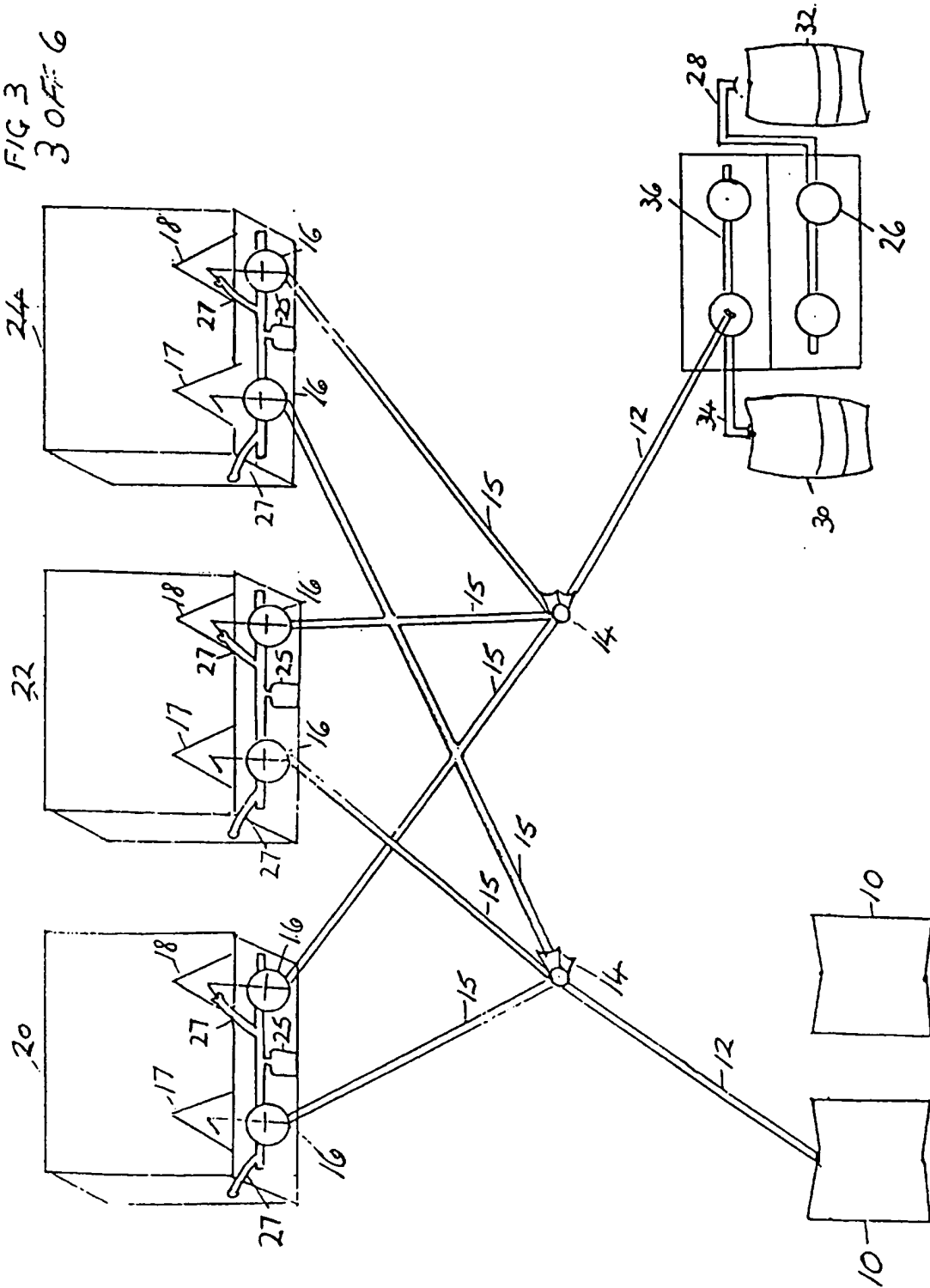




FIG 3  
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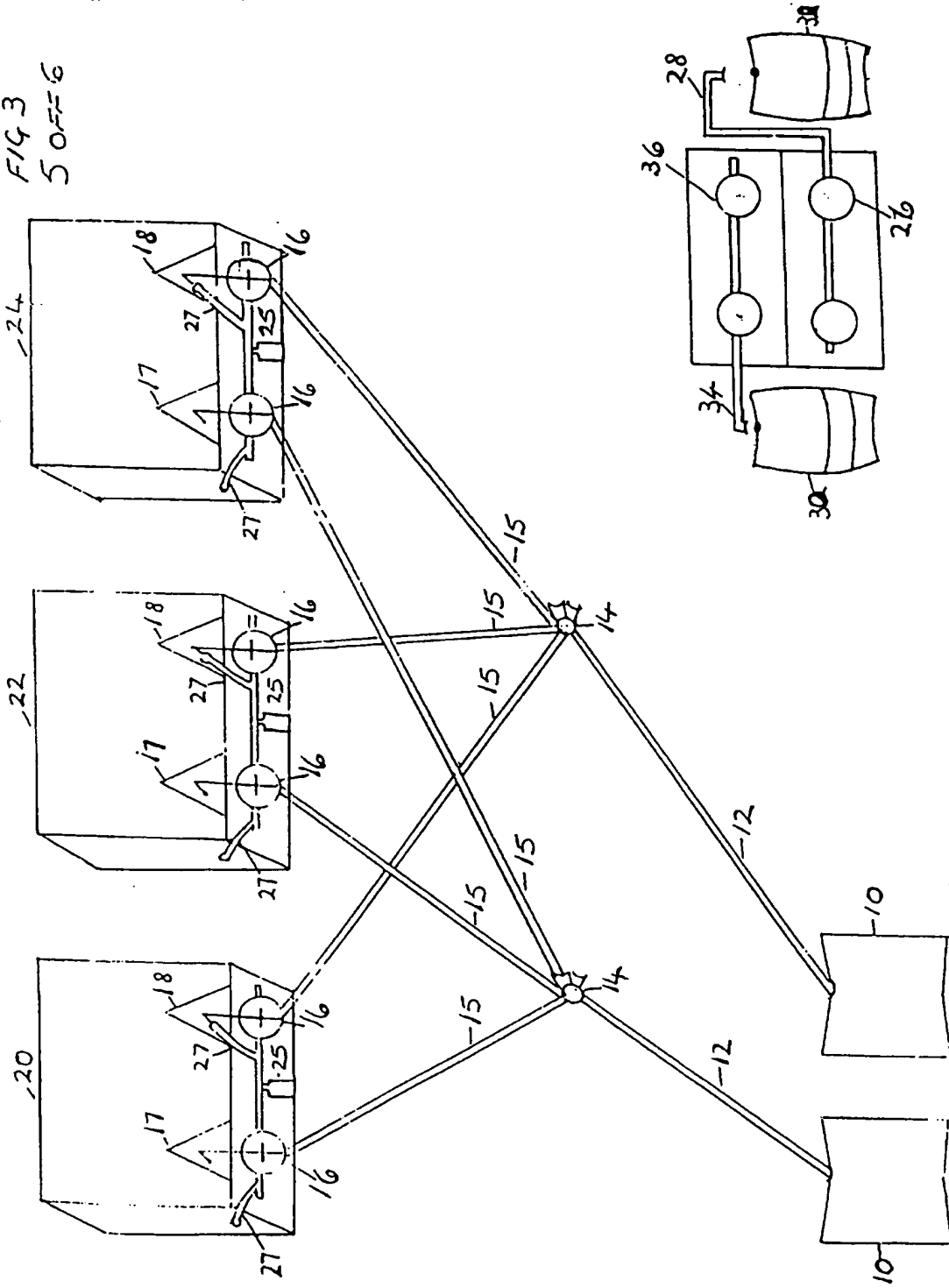
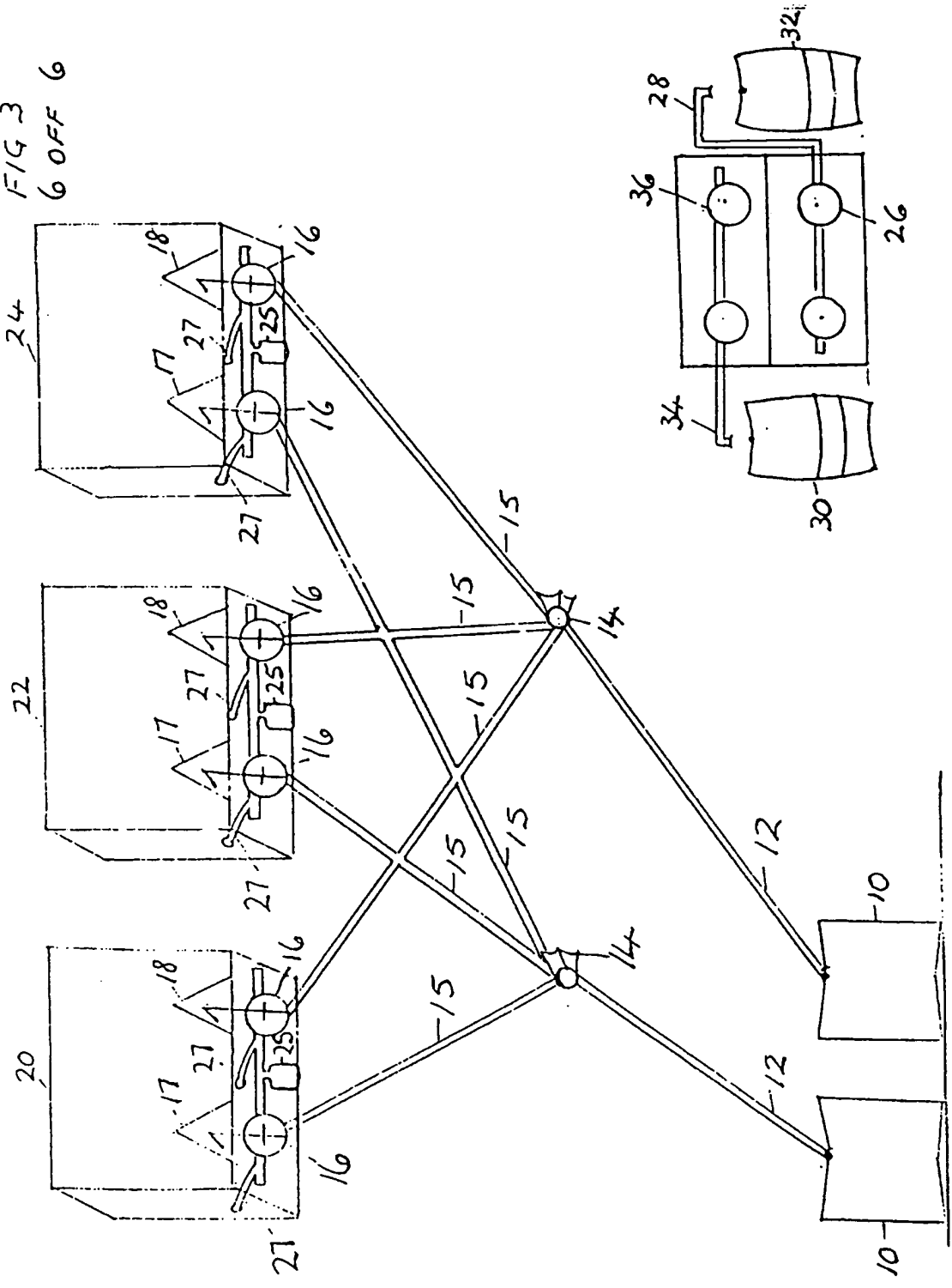


FIG 3  
6 OFF 6





**2297598**

**SENSOR**

**This invention relates to cleaning beer pipes which is a well-known procedure.**

**The cleaning procedure is done prior to opening hours. Cleaning fluid is introduced via the ring main cleaning system. The beer is dispensed through the fonts, all beers are disposed of which is a total loss.**

**According to the present invention, a water sensor is positioned close to the font head as the water reaches this position the font will be immobilised.**

**As this new system is carried out during opening hours, all beers etc. are sold to customers, thereby making a tremendous saving.**

<b><u>Item No.</u></b>	<b><u>Name of Item</u></b>
10	Beer Keg
12	Beer Pipe Keg to Motor
14	Motor
15	Beer Pipe Motor to Font Head
16	Sensor
17	Font Left
18	Font Right
20	Main Bar Counter
22	Concert Room Bar Counter
24	Lounge Bar Counter
25	Waste Disposal System
26	Water Ring Main Cleaning System
27	Flexy Pipe
28	Coupling Pipe from Water Ring Main to Cleaning Bottle
30	Cleaning Fluid Bottle
32	Cleaning Water Bottle
34	Coupling Pipe from Fluid Ring Main to Cleaning Bottle
36	Fluid Ring Main Cleaning System

**Figure 1 is in four parts:**

**Part 1 of 4**

A keg of beer supplying three separate bars.

**Part 2 of 4**

The keg of beer supply connection is affixed to the ring main cleaning system which is coupled to the cleaning fluid bottle, the fluid forcing the beer from the pipes.

**Part 3 of 4**

The water cleaning bottle is coupled to the ring main system and the pipes are flushed out.

**Part 4 of 4**

The beer pipe is now returned to the keg of beer and the beer is introduced back into the pipes.

**Figure 2 is in five parts:**

4

**Part 1 of 5**

We now have two kegs feeding beer through individual motors and fonts on all products.

**Part 2 of 5**

One keg is supplying beer while the other keg connection is attached to the ring main system, which is coupled to the water bottle, the beer which is in the pipe is sold, the water sensor will immobilise the front when water appears.

**Part 3 of 5**

The cleaning fluid bottle which is now coupled to the ring fluid is introduced into the pipes and left for recommended periods.

**Part 4 of 5**

The water supply is again affixed to the ring main, the pipes are then flushed to taste.

**Part 5 of 5**

The keg connection is now replaced and the beer is returned to the pipes ready for serving.

**FIGURE 3 in 6 parts****Part 1 of 6**

We now have two kegs feeding beer through individual motors and fonts on all products.

**Part 2 of 6**

One keg on each product is supplying beer while the other keg to motor pipe is attached to the water ring main system. The beer which is being pushed from the pipes by the water is sold to customers. The *sensor* will immobilise the font when water appears.

**Part 3 of 6**

As each font is immobilised, the flexy pipe must be attached to the font dispenser, so as to enable line cleaning waste to filter through into the waste disposal drain. The keg to motor pipe is attached to the ring main cleaning fluid system. The cleaning fluid is introduced into the system. The *sensor* will immobilise the font when cleaning fluid appears. The fluid is left in the system for a recommended period.

**Part 4 of 6**

The keg to motor pipe is again returned to the water ring main system - the beer pipes are flushed with water.

**Part 5 of 6**

The keg to motor pipe is now returned to the keg of beer. The beer is returned to the beer pipes pushing the water out. The *sensor* will immobilise the font when the beer appears.

**Part 6 of 6**

The flexy pipe is now removed from the dispenser. The cleaning operation is now completed.

## **CLAIMS**

1. A public house with various draught beer products - the beers are projected from the cellar to the bar font dispensers. Each bar must have a minimum of two fonts for each product. The fonts will be supplied with beer through their own independent systems - this will ensure the cleaning of these systems to be done independently. Each font will have a sensor fitted. There are two ring main cleaning systems - one for water and one for cleaning fluid. A waste disposal system for filtering waste away from the font dispensers during the cleaning operation.
2. A public house, as claimed in (1) above wherein each sensor is positioned so as to alleviate any infringement on the quality of the product during the cleaning operation.
3. A public house, as claimed in (2) above wherein each sensor can be set to activate the immobilisation of a font when water fluid or beer reaches the sensor during the cleaning operation.
4. A public house as claimed in (3) above wherein the first stage of the cleaning operation is the introduction of water behind the beer, when the water reaches the sensor the first immobilisation takes place. The flexy pipe should be attached to the font dispenser and should remain in this position until the beer has been returned and the final immobilisation after cleaning is completed.
5. A public house as claimed in (4) above wherein the flexy pipe allows all cleaning waste to filter through waste disposal into the drain outlet provided.
6. A public house as described herein, with specific reference to Figures 1-6 of the accompanying drawings.



# The Patent Office

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Application No: GB 9506945.6  
Claims searched: 1 to 6

Examiner: Karl Whitfield  
Date of search: 15 April 1996

## Patents Act 1977 Search Report under Section 17

### Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:  
UK Cl (Ed.O): F2N (N2A), G1N (NBAA, NBMA)  
Int Cl (Ed.6): BO8B 9/02, 9/06, B67D 1/07, 1/08  
Other: Online database: Derwent World Patents Index accessed via DIALOG

### Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
Y	GB 2287296 A (PEKTRON) whole document relevant	1 & 2
Y	GB 2260795 A (WEST & WEIR-RHODES) whole document relevant	1 & 2

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